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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,713	12/07/2001	Ryoichi Mukai	0671.66045	5134

24978 7590 08/24/2005

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EXAMINER

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,713

Applicant(s)

MUKAI, RYOICHI

Examiner

Holly Rickman

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1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 10, 12 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 2, 10 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Interpretation

1. It is noted that claim 15 requires that "Cr is present only at the crystal grain boundaries of said Co-Cr-based alloy. This limitation has been interpreted to mean that Cr atoms are present in the grain boundary regions of the magnetic layer but there are **no** Cr atoms present in the magnetic grains.

Claim Rejections - 35 USC § 102

2. The rejection of claim 12 under 35 U.S.C. 102(b) as being anticipated by or under 35 U.S.C 103(a) as being unpatentable over Kubota et al. (English translation of JP 64-79919).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The rejection of claims 2, 10, and 15 under 35 U.S.C. 103(a) as being unpatentable over Kubota et al. (English translation of JP 64-79919) is withdrawn in view of Applicant's arguments.

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5. Claims 2, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranjan et al. (US 5840394) in view of Chuang et al. (US 6139981).

Ranjan et al. disclose a magnetic recording medium having a substrate, a sputtered NiP underlayer and a first magnetic layer formed from a Co alloy containing less than 5 at% Cr (col. 2, lines 31-34 and lines 59-60). The reference is silent with regard to the presence of a Cr underlayer.

Chuang et al. teaches a magnetic recording medium having a sputtered NiP layer on a substrate, a Cr underlayer thereon and a CoCr-based magnetic recording layer. The reference teaches that a Cr underlayer having a (200) structure can be used between the NiP seedlayer and the magnetic layer in order to induce [1120] orientation in the magnetic recording layer (col. 2, lines 21-50; col. 4, line 65 to col. 5, line 4). The reference teaches that the conventionally used Cr underlayer thickness is about 5.5 nm.

It would have been obvious to one of ordinary skill in the art at the time of invention to insert a Cr underlayer as taught in the prior art in between the NiP layer and the CoCr magnetic layers taught by Ranjan et al. in order to produce a recording medium having a recording layer with a [1120] preferred orientation.

Allowable Subject Matter

6. Claim 12 is allowable over the closest prior art to Kubota et al. for the reasons argued by Applicant in the response filed 5/31/05.

Response to Arguments

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7. Applicant's arguments filed 5/31/05 have been fully considered but they are moot in view of the new grounds of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Holly Rickman
Primary Examiner
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